

# October 2011 Sky Events – the Planets

- ★ Saturn reaches conjunction with the Sun on October 13<sup>th</sup> and will be lost behind the Sun the entire month.
- ★ Saturn will return to the pre-dawn sky by November, but will not be easily visible again in the early evening sky until May 2012.
- ★ But get ready for Jupiter! It rises in Aries less than one hour after sunset on October 1<sup>st</sup>.
- ★ Jupiter reaches opposition with the Sun on the night of October 28/29, when it will rise brilliantly at sunset and set at sunrise.
- ★ At magnitude -2.9, Jupiter outshines all the stars.

# October 2011 Sky Events – the Planets

- ★ **Neptune** will be visible at magnitude 7.9 through a telescope most of the night **in the constellation Aquarius**.
- ★ **Uranus**, shining at magnitude 5.7 **in the constellation Pisces**., will also be visible through a telescope most of the night.
- ★ This month is a great time to observe both Uranus and Neptune – our solar system's outermost planets and the only 2 solar system planets to be discovered using a telescope.
- ★ **Venus** is visible very low in the west shortly after sunset, shining brightly at magnitude -3.9. This month it sets less than an hour after sunset.

# October 2011 Sky Events – the Planets

- ★ **Mercury** will be challenging to locate this month as it is lost in the Sun's glare.
- ★ **Mars** can be found during the month **in the constellations Cancer and Leo**. It does not rise until about 2:00 to 2:30 a.m..
- ★ In the pre-dawn hours of Oct. 1<sup>st</sup> and 2<sup>nd</sup>, the orange disk of the planet **Mars crosses in front of the brilliant white stars of the Beehive Cluster (M44) in Cancer**.
- ★ Oct. 1<sup>st</sup> is the better of the 2 dates.

# Mars in the lovely Beehive Star Cluster (Messier 44)

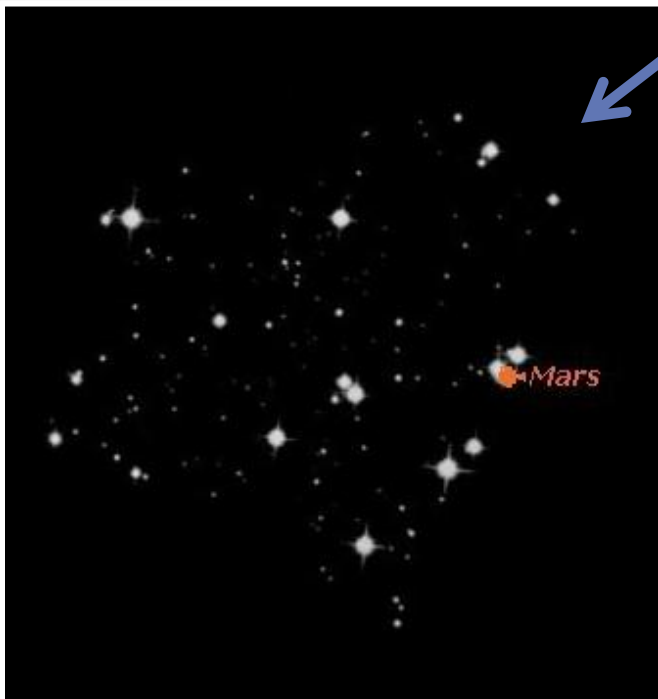
The planet Mars shines bright orange in the foreground of this beautiful open star cluster located in the faint constellation Cancer.

While the star cluster is 500 light years away, Mars is only 15 light minutes away.

The view from Asheville, NC on October 1, 2011 at 6:00 a.m. EDT



Best viewed with binoculars or a telescope at low power



# October 2011 Highlight: Conjunction of Jupiter and the Moon

Find the just-past full Moon dancing by Jupiter on the nights of October 12-15<sup>th</sup>.

The nights of October 12 & 13<sup>th</sup> present the closest juxtaposition.

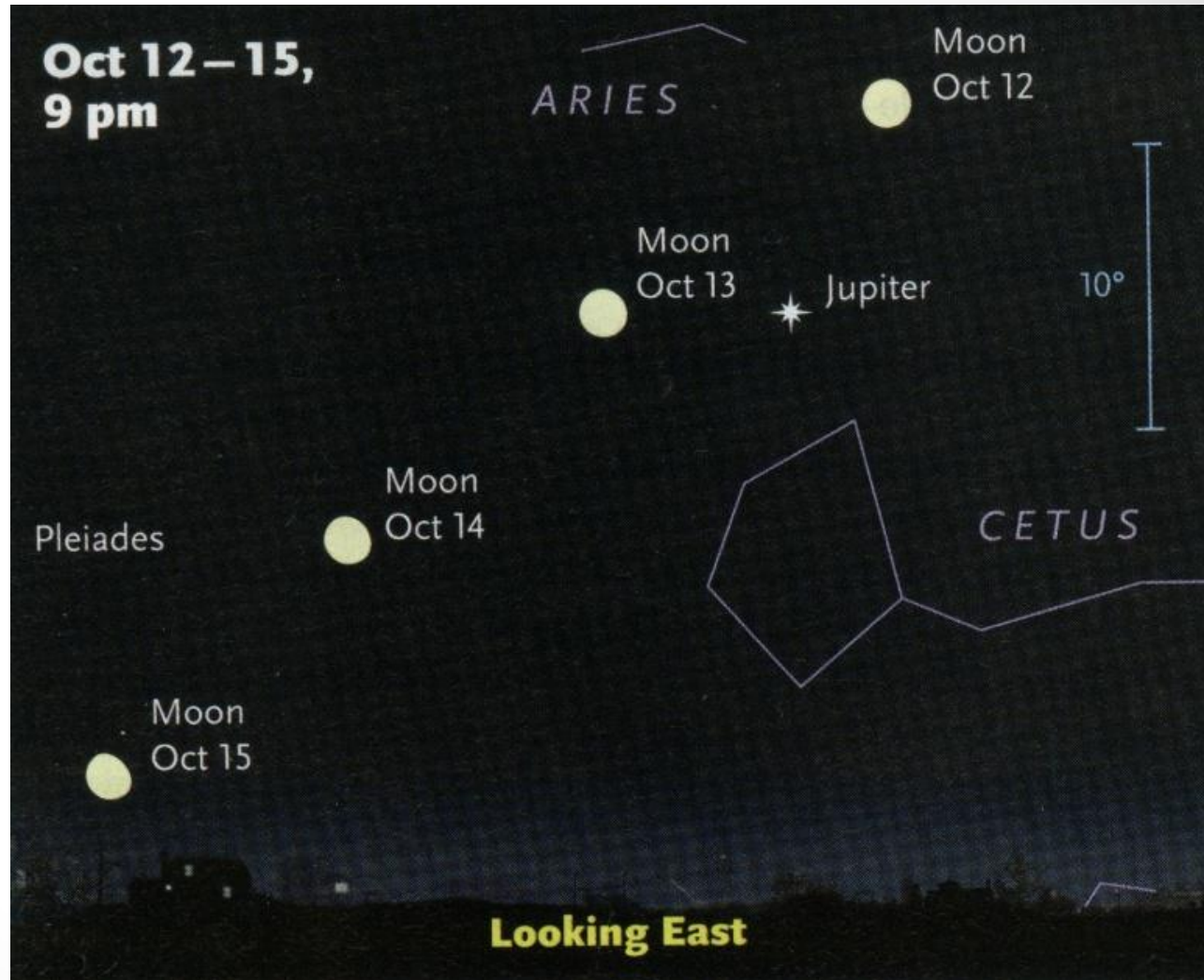


Image courtesy of Sky & Telescope

# Oct. 2011 Planet Highlights

<u>Planet</u>	<b>Avg. Distance from Earth</b>	<b>Constellation(s)</b>	<b>Avg. Diameter in arc seconds</b>	<b>Avg. Magnitude</b>	<b>Comments</b>
<b>Mercury</b>	1.3 AU <sub>s</sub>	Virgo & Libra	4.9	-0.9	Lost in the Sun's glare
<b>Venus</b>	1.6 AU <sub>s</sub>	Virgo & Libra	10.3	-3.9	Find it very low in the west at sunset
<b>Mars</b>	1.7 AU <sub>s</sub>	Cancer & Leo	5.5	1.2	In the eastern pre-dawn sky

# Oct. 2011 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Jupiter	4.0 AU <sub>s</sub>	Aries	49.0	-2.9	Reaches opposition on Oct. 28/29
Saturn	10.6 AU <sub>s</sub>	Virgo	15.6	0.7	Reaches conjunction on Oct. 13
Uranus	19 AU <sub>s</sub>	Pisces	3.7	5.7	Great month to observe it

# Oct. 2011 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Neptune	29 AU <sub>s</sub>	Aquarius	2.3	7.9	Great observing position this month

# The Moon this month – October 2011

☾★ First Quarter – 3<sup>rd</sup> at 11:15 p.m.

☾★ Full Moon – 11<sup>th</sup> at 10:06 p.m. → **Hunter's Full Moon \***

☾★ Last Quarter – 19<sup>th</sup> at 11:30 p.m.

☾★ New Moon – 26<sup>th</sup> at 3:56 p.m.

**Unless otherwise indicated, all times are EDT**

**\* smallest full moon in 2011**

# Friday evening, Oct. 28th

## Monthly club stargaze at Mt. Pisgah

- ★ **Sunset:** 6:39 p.m. EDT
- ★ Don't forget to observe the 7% illuminated **waxing crescent Moon** in the constellation Scorpius – low in the SW at sunset.
- ★ Find **Venus** and challenging **Mercury** below the Moon in the SW in Libra just after sunset – you may need to use binoculars to locate fainter and lower Mercury.
- ★ The Moon sets by 8:08 p.m. EDT.

# October 28 & 29, 2011 Star Gaze

## Mercury, Venus, Antares and the crescent Moon

- ★ Find this wonderful conjunction of 2 planets, the waxing crescent Moon and the red giant star Antares about 30 minutes after sunset on the nights of October 28 & 29<sup>th</sup>.
- ★ You will need an unobstructed view low to the SW.
- ★ Use binoculars or a small telescope to locate challenging Mercury.

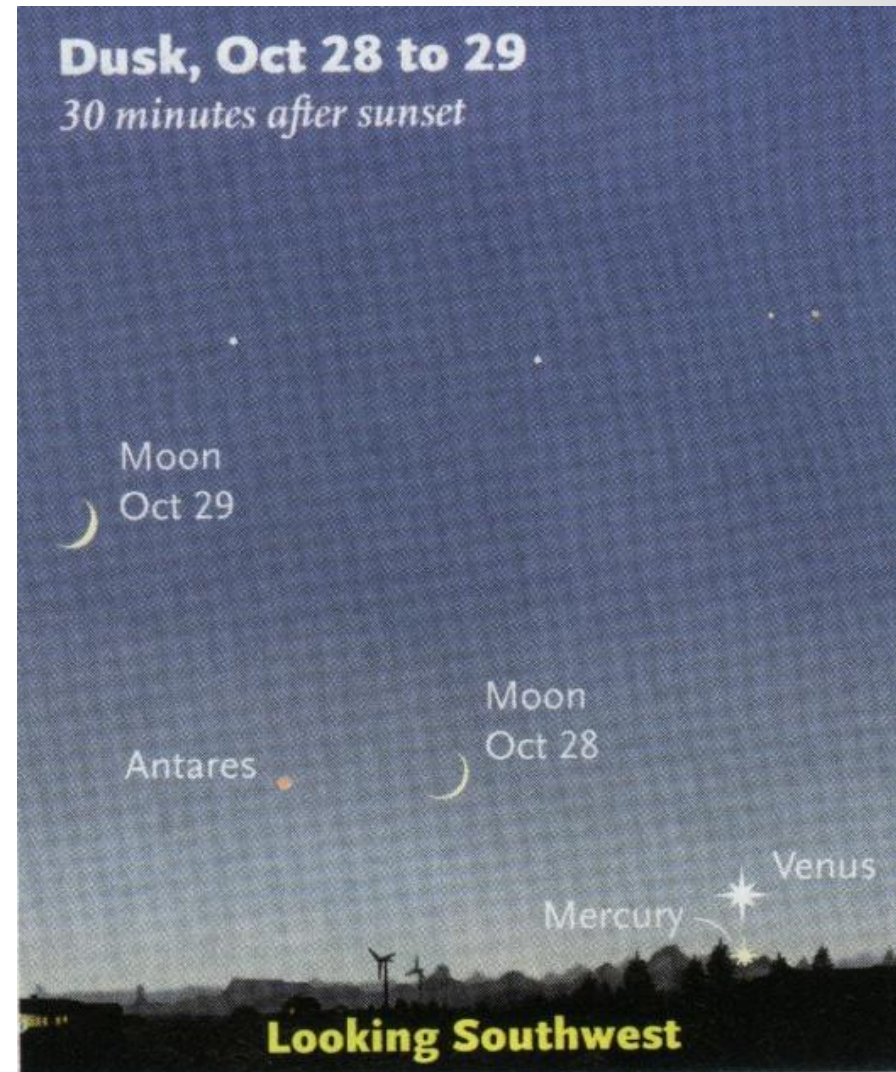


Image courtesy of Sky & Telescope

# Friday evening, Oct. 28th

## Monthly club stargaze at Mt. Pisgah

- ★ **Jupiter** rises in Aries at sunset tonight.
- ★ Before 8:30 p.m. local time **all 4 of Jupiter's Galilean satellites are visible.**
- ★ At 8:39 p.m. **Io begins eclipse/occultation** behind Jupiter's disk and erupts out of eclipse/occultation about 10:49 p.m..
- ★ This is a great opportunity to see, first-hand, the solar system in motion! → **a Galileo moment!**
- ★ Jupiter's **Great Red Spot transits** its central meridian about 11:26 p.m. local time → can you “spot” it?

Friday evening, Oct. 28th

## Monthly club stargaze at Mt. Pisgah

- ★ This would be a good night to locate and observe the 2 most distant solar system planets (**Uranus and Neptune**), the closest dwarf planet (**Ceres – also the largest asteroid**) and the brightest asteroid (**Vesta**).
- ★ All 4 of these solar system objects are well above the S and SE horizons by 7:40 p.m. (one hour after sunset).
- ★ To observe these 4 objects you will need a telescope along with a good location chart, digital-setting-circles, and/or a go-to telescope.
- ★ You will find Uranus in the constellation Pisces, Neptune and Ceres in the constellation Aquarius (although some 25° apart), and Vesta in the constellation Capricornus.

# Friday evening, Oct. 28th

## Monthly club stargaze at Mt. Pisgah

- ★ Find 8<sup>th</sup> magnitude **Comet Garrard** in the constellation Hercules, near the Ophiuchus border, early in the evening. You'll need binoculars or a telescope.
- ★ Can you detect its faint tail extending upwards away from the western horizon?
- ★ It's coordinates tonight are: RA 17h 39m & DEC +18° 43'
- ★ The Heaven-Above.com website is forecasting a -2 **Iridium flare** about 7:36 p.m. this evening. Check their website for updates as Oct. 28<sup>th</sup> gets closer.
- ★ For the those of you who stay up late (very late), look for the **Mars rising in the east** in the constellation Leo around 2:00 a.m..

# October 2011 Highlight:

## Two meteor showers: Draconids & Orionids

- ★ The **Draconids** peak this year on the **evening of October 8<sup>th</sup>** with a higher than normal meteor count expected.
- ★ Periodic (6.6 year orbit) **comet 21P/Giacobini/Zinner** is the source of these meteors, and this year Earth is predicted to cross a dense debris stream from the comet.
- ★ Meteor specialists have meteor counts for this pass as high as **500 per hour**, radiating from the northern constellation **Draco** → near the **Dragon's head**.
- ★ This is not without precedent as the Draconids stormed briefly to 10,000 meteors per hour in 1933!
- ★ The bad news this year is that the **bright waxing gibbous Moon** will seriously hinder the observing of these shooting stars.

# October 2011 Highlight:

## Two meteor showers: Draconids & Orionids

- ★ The **Orionids** peak this year on the **evening of October 21/22**.
- ★ Periodic (76 year orbit) **comet 1P/Halley** is the source of these meteors.
- ★ Meteor specialists have meteor counts for this pass averaging a modest **20 per hour**, best visible before dawn under dark skies.
- ★ These meteor fragments radiate from the top of Orion's upraised club, near the Gemini border.
- ★ The **waning crescent Moon** this year should not interfere much with your observing of these shooting stars.

# October 2011 Telescope Highlight: Galaxy NGC 7331 in Pegasus

10<sup>th</sup> magnitude NGC 7331 (aka Caldwell 30) is the largest member of the Deer Lick Galaxy group in the constellation Pegasus.

Telescopes of 100mm aperture or more under good sky conditions should detect this nearly edge-on spiral smudge.



Located about 50 million light years away

Coordinates: RA 22h 37m & DEC +34° 24'

# October 2011 Telescope Highlight:

## Two open star clusters in Lacerta

- ★ The faint northern constellation of Lacerta, the Lizard, is high in the sky this month, and contains 2 wonderful open star clusters for small telescopes: **NGC 7209 & 7243**.
- ★ **NGC 7243** (aka Caldwell 16) is the brighter of the two clusters at magnitude 6.4 and is located some 2,500 light years away → RA 22h 15m; DEC 49<sup>o</sup> 54m.
- ★ More distant **NGC 7209** (3,500 light years away) shines at magnitude 6.7 → RA 22h 05m; DEC 46<sup>o</sup> 29m.

# October 2011 Telescope Highlight: Two open star clusters in Lacerta

NGC 7209  
& 7243

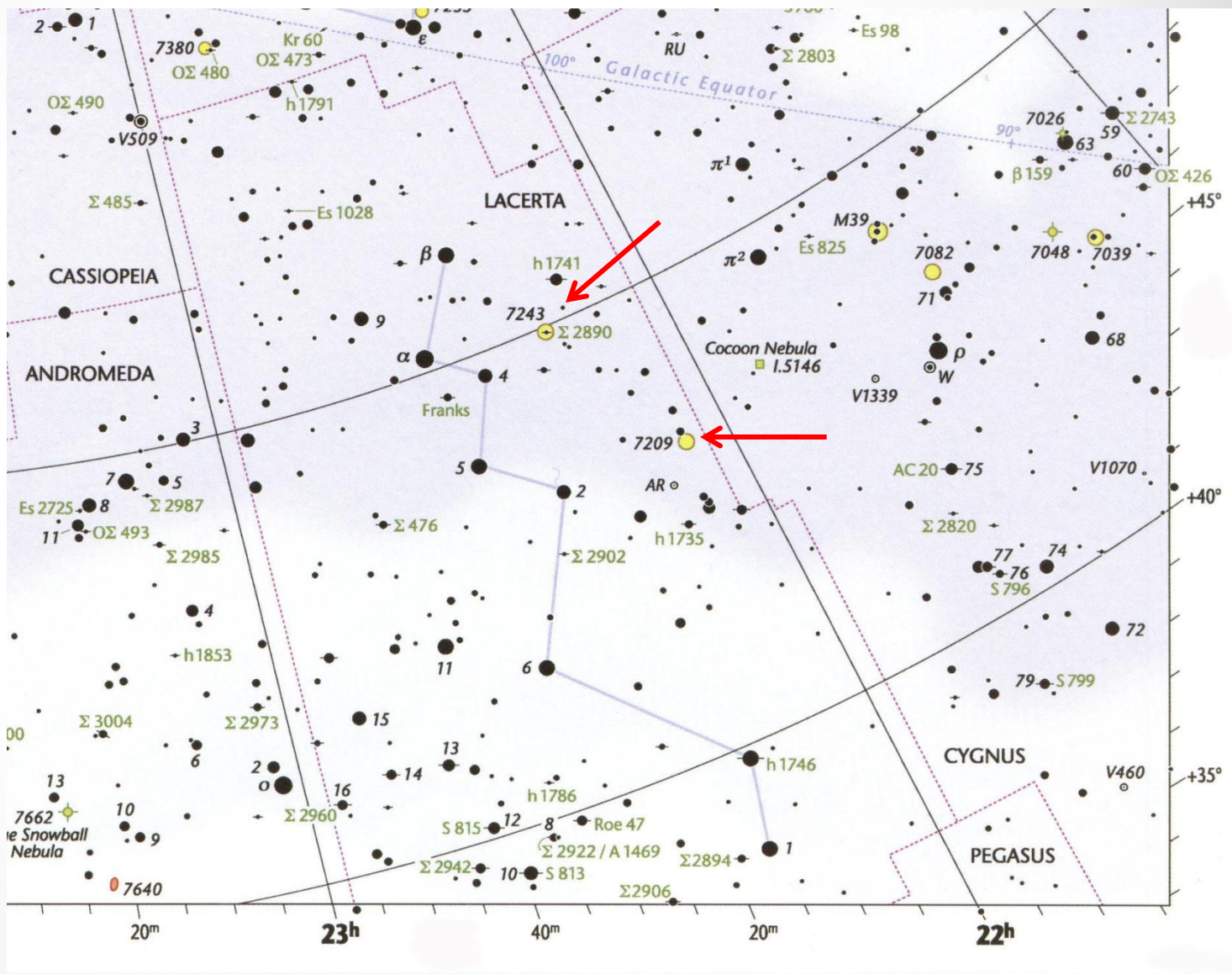
Coordinates:

NGC 7209

RA 22h 05m;  
DEC 46° 29m

NGC 7243

RA 22h 15m;  
DEC 49° 54m



# October 2011 Telescope Highlight:

## Two open star clusters in Lacerta



NGC 7209



NGC 7243

**End**